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DISTRIBUTION of COD CATCHES

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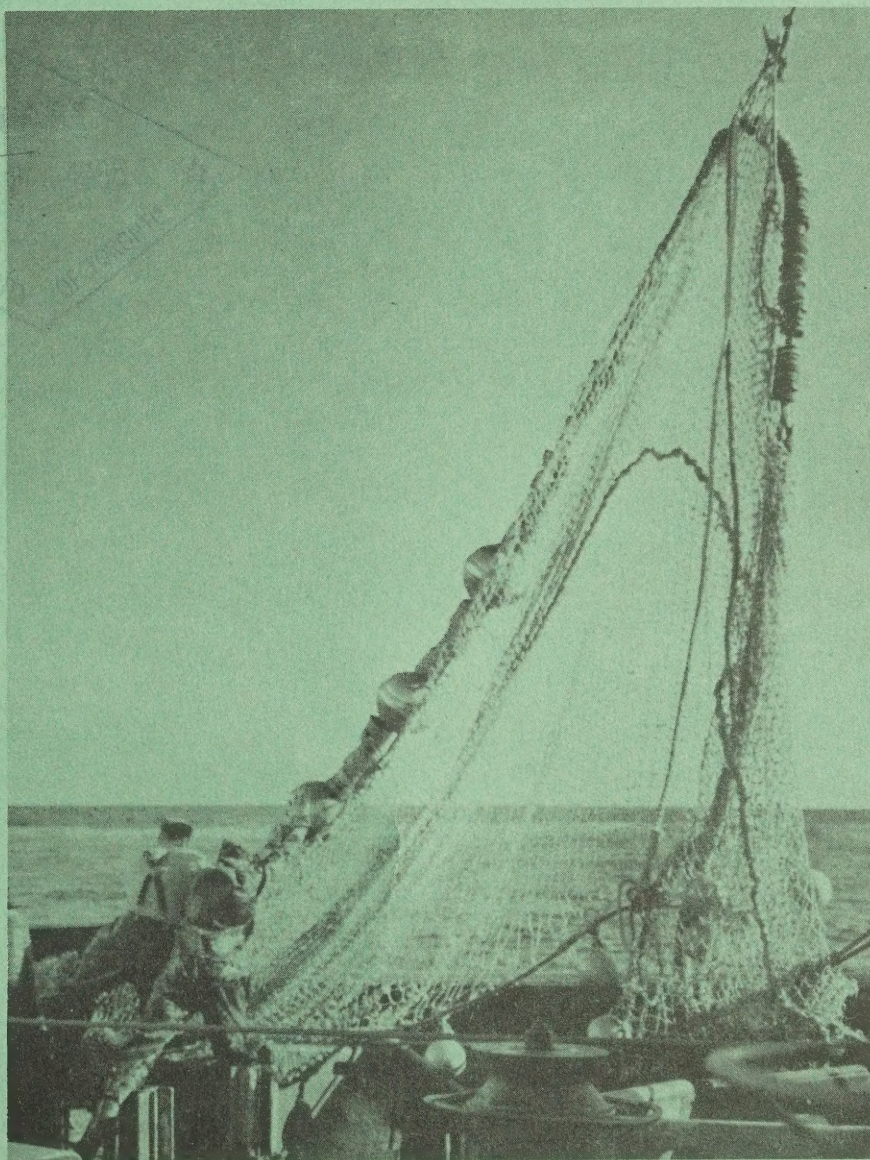
COMMERCIAL VESSELS in the GULF of ST. LAWRENCE

1960 - 1962

by Marcel Mousselle, F.D. McCracken and Alexandre Marcotte



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Canada
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FISHERIES RESEARCH BOARD (OF CANADA) BIOLOGICAL STATION, ST. ANDREWS, N.B.

General Series Circular (No. 44, January, 1965)

Distribution of Cod Catches by Commercial Vessels in the Gulf of St. Lawrence, 1960-62

by Marcel Moussette, F.D. McCracken and Alexandre Marcotte

DURING the last 15 years, commercial fishing in the Gulf of St. Lawrence has increased markedly. Large numbers of boats operate throughout the Gulf on various fishing banks at the same time. By knowing where commercial vessels fish and what they catch, useful information can be summarized, particularly about the seasonal distribution of groundfish on the various grounds.

Many masters of otter trawlers in New Brunswick, Nova Scotia, Prince Edward Island and Quebec have been good enough to keep log records. In these are recorded the position, depth, and the duration of each tow and the quantities of fish taken. From these records, obtained through the efforts of the Fisheries Research Board of Canada (Biological Station, St. Andrews, N.B.) and the Bureau of Statistics of Quebec, we have been able to chart the monthly distribution and importance of otter-trawler catches by region.

In working out this distribution, to show fishing areas in detail, we have had to use smaller unit areas than the divisions adopted by the International Commission for the Northwest Atlantic Fisheries (ICNAF). We have thus divided the Gulf of St. Lawrence into rectangles, 20 minutes longitude and 30 minutes latitude. For each month we have indicated the weight of cod taken by otter trawlers from each rectangle by a red dot for every 25,000 pounds caught. We also considered depth fished wherever possible so that in general one can consider that the dots on the chart are correctly located according to depth.

As a result of the information obtained we have been able to show the principal regions of concentrated fishing. These extend from the north shore of the Gulf of St. Lawrence to Cape Breton. In the Quebec north shore region the fishing areas for these years are off Natashquan, River Saint Jean, Thunder River and Seven Islands.

Around Gaspé the places where most cod are taken are American Bank, Bonaventure Island and Miscou Bank.

Around Cape Breton the greatest catches are recorded in the regions near Cheticamp, Cape St. Lawrence, Cape North, Cape Smoky and Sydney Bight.

By comparing the distribution of otter-trawl catches from month to month the seasonal migrations

of cod in the Gulf of St. Lawrence can be described. From December to June cod are taken mainly off Cape Breton. However, by May, some cod are fished off Gaspé. From July to November cod are steadily fished off Gaspé and the north shore of the Gulf of St. Lawrence. By December cod are taken again mainly off Cape Breton.

These basic facts suggest a northwestward spring migration of cod from Cape Breton toward the Gaspé peninsula and a southeastward fall migration toward Cape Breton. A similar pattern of movements has been obtained from all recent tagging in the Gulf of St. Lawrence and Cape Breton regions.

In using the charts various qualifications must be kept in mind. The first is that the information is provided by commercial fishermen who are constantly influenced by many outside factors, including weather conditions, prices on various kinds of fish, and how easily the banks are reached from their home ports. The charts tend to show concentration of fish since the otter-trawler skippers seek areas where they believe they can catch the largest amounts. A second limitation in our results is the recording of positions and catches in many of the log records which are not precise. We have attempted to compensate for these by adjusting from the more accurate fishermen's log records. Greater accuracy and detail on the log records would enable us to produce better charts.

These charts have resulted from the co-operation of a number of agencies. Those participating in collection and compilation of information are: The Fisheries Research Board of Canada's Biological Station at St. Andrews, N.B.; the Economics Service of the Fisheries Department of Canada; the Department of Fisheries for the Provinces of New Brunswick and Prince Edward Island; the Marine Biological Station at Grande-Rivière, P.Q.; and the Bureau of Statistics of the Quebec Department of Industry and Commerce. The continued interest of their field staffs in these log record collections should be recorded.

The results have been possible only through the co-operation of fishermen who kept log records for these groups. We extend our thanks to them and our hopes for continued co-operation.

¹ Adapted from the French version published as "Distribution des captures commerciales de morues dans le Golfe St-Laurent". Cahiers d'Information No. 22 of the Grande-Rivière Marine Biological Station, Ministry of Industry and Commerce, Quebec.



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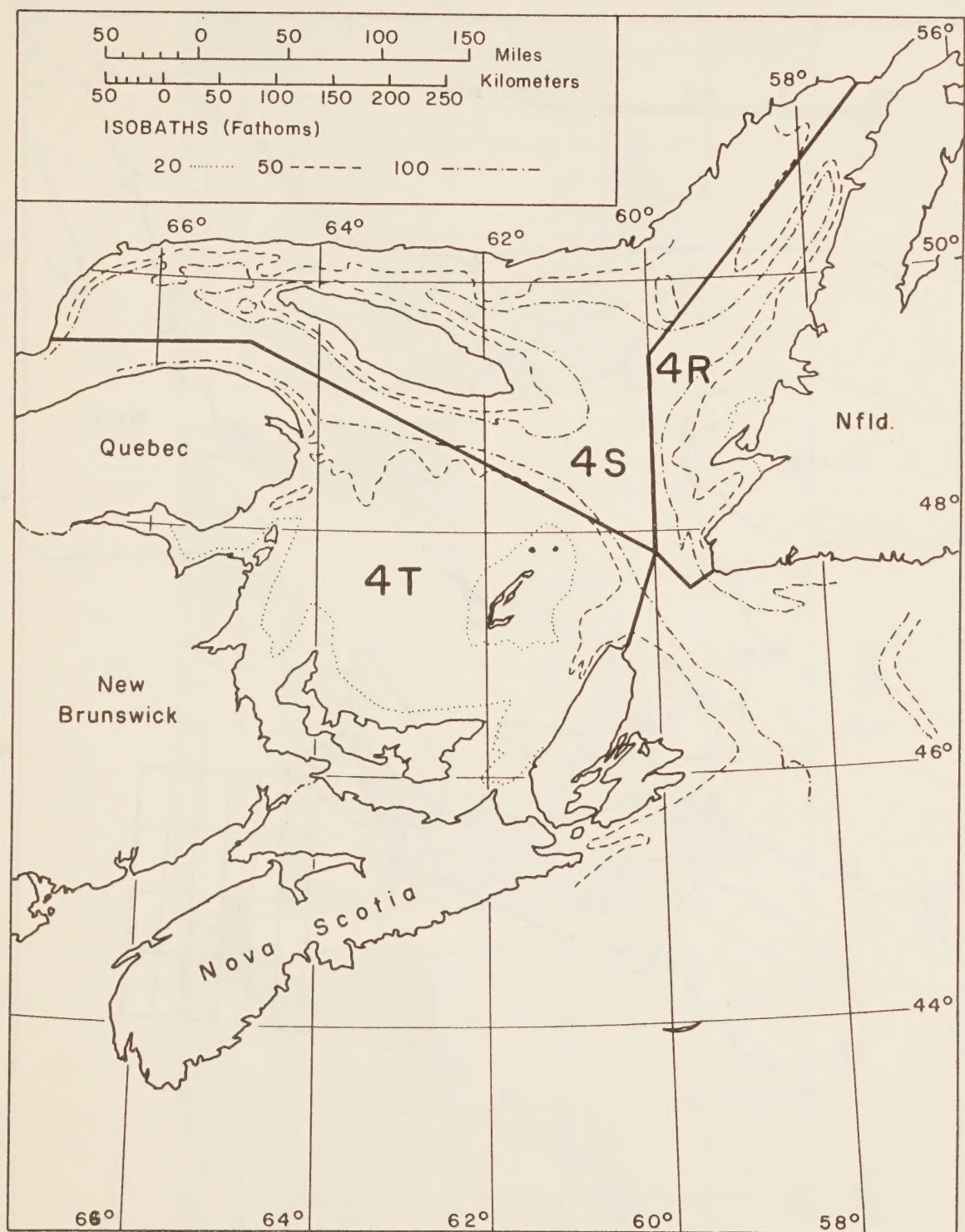


Fig. 1. Map of the area and divisions established by the International Commission for the Northwest Atlantic Fisheries.

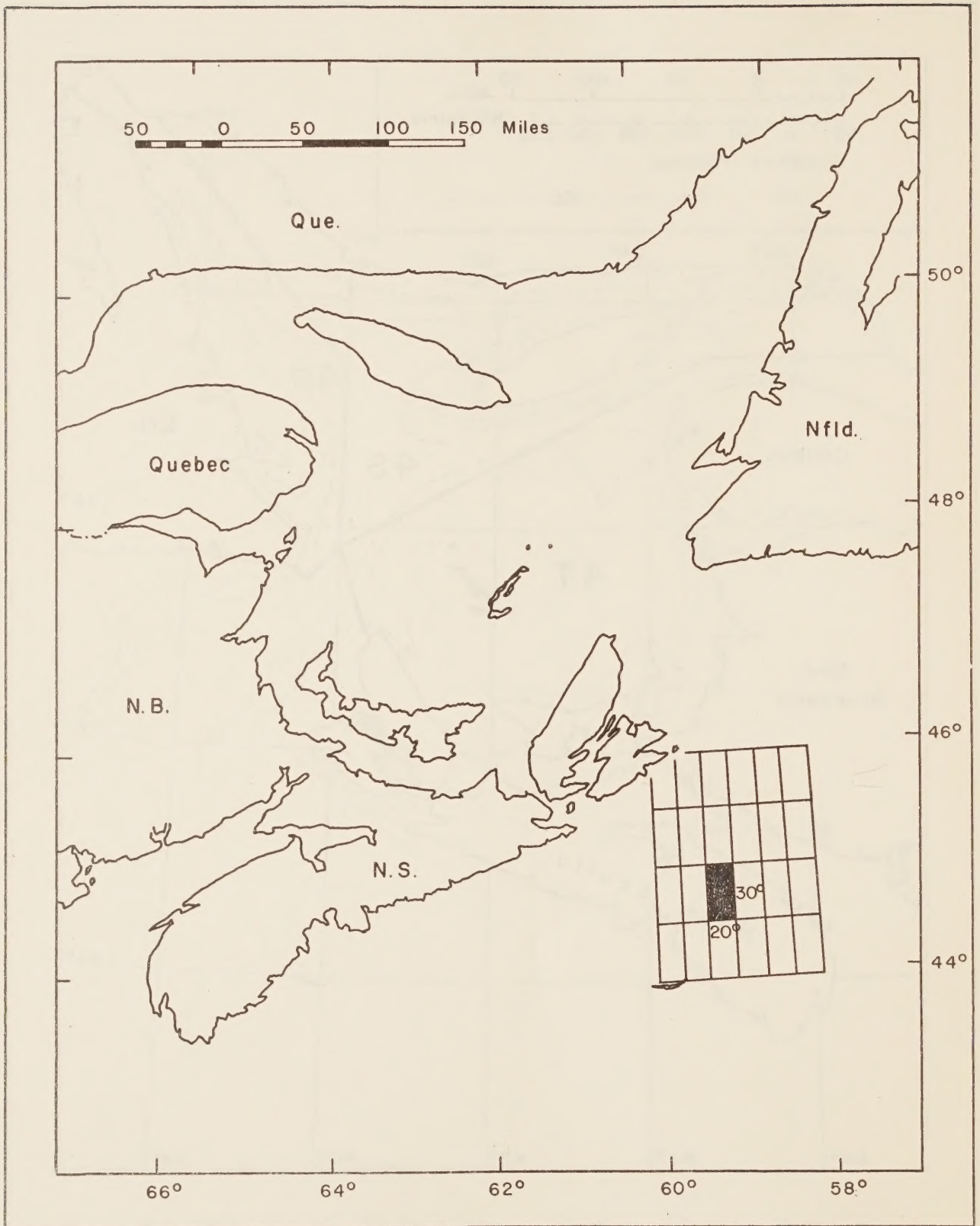
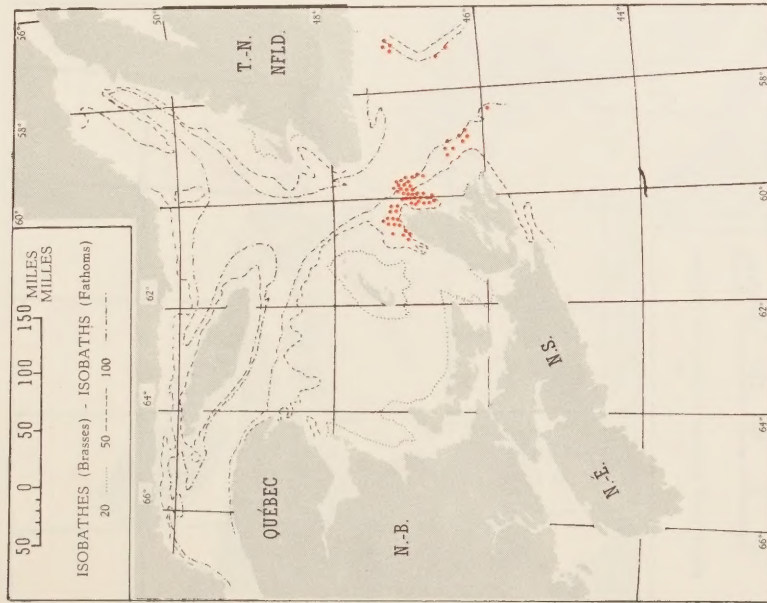


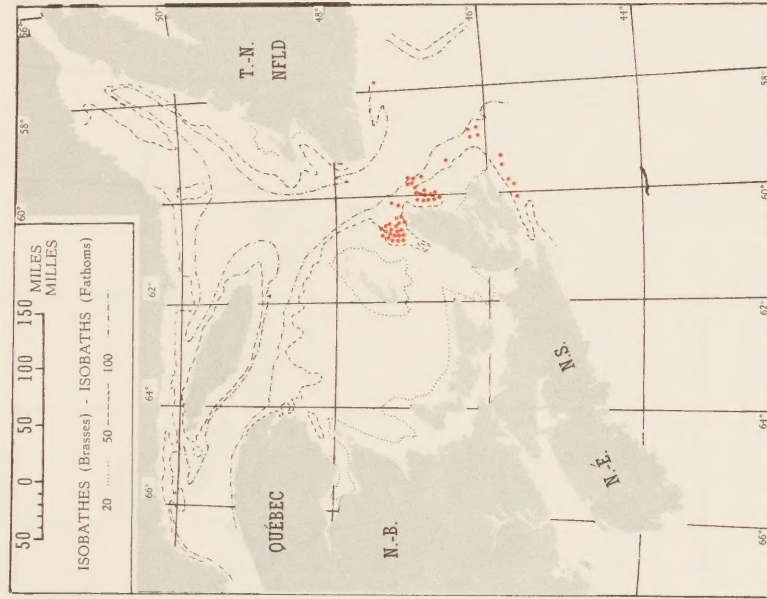
Fig. 2. The area occupied by one region is shown in black.

JANUARY

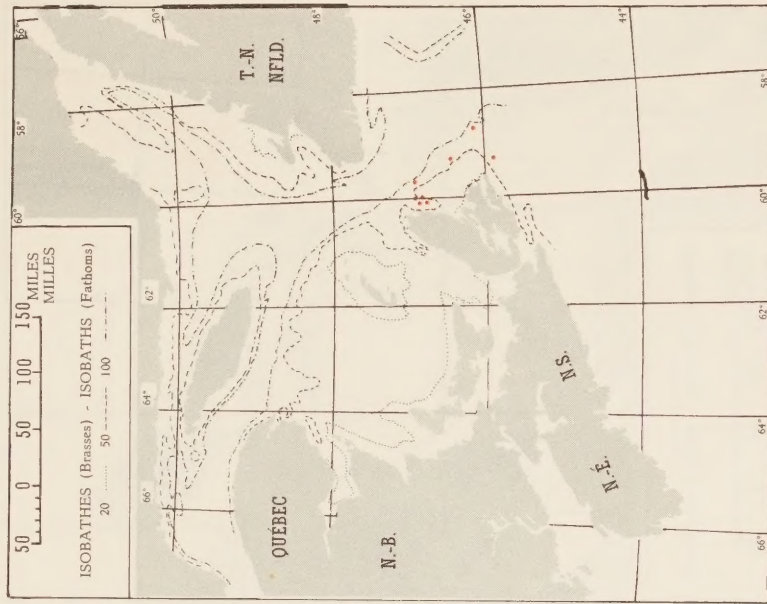
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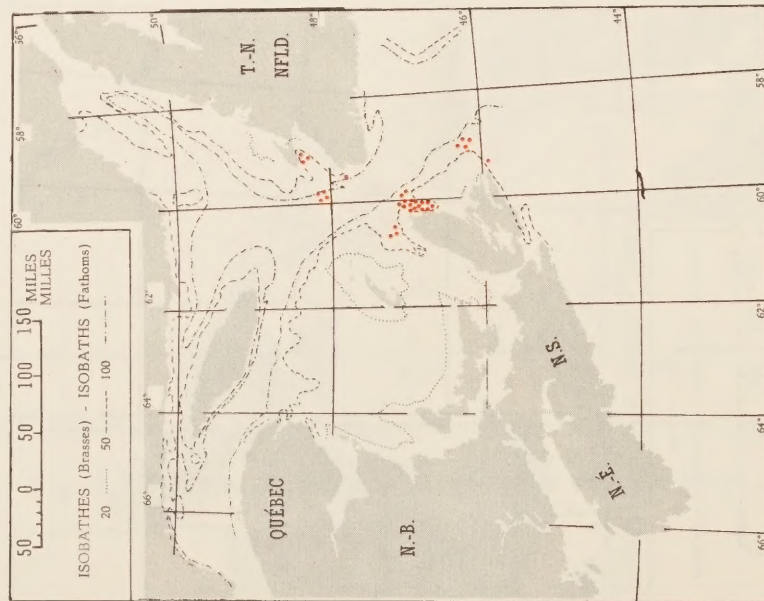
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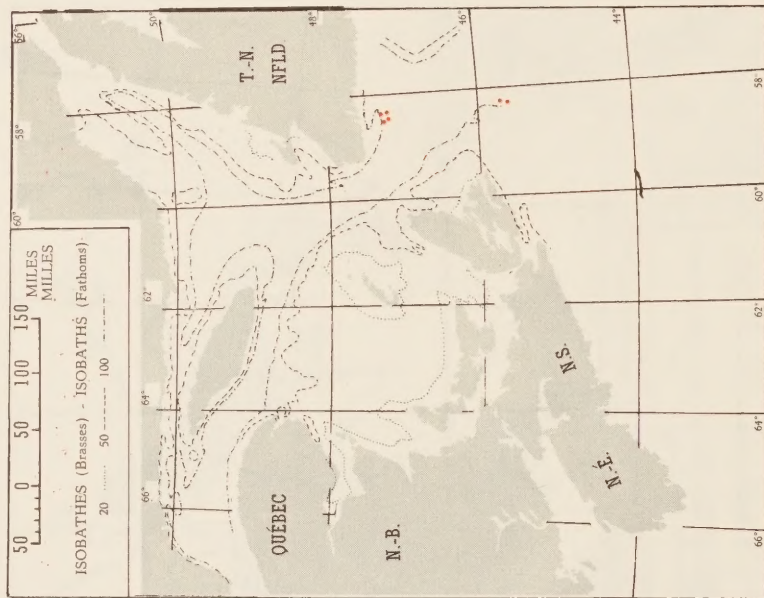
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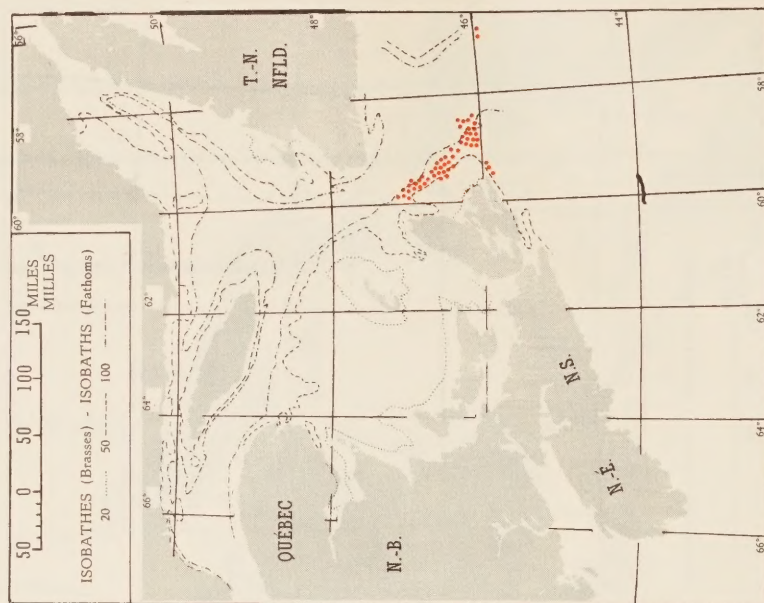
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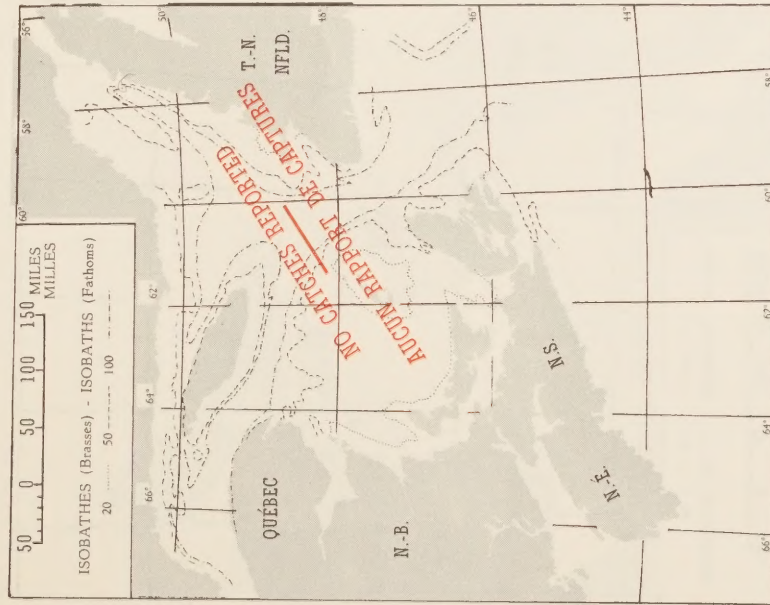
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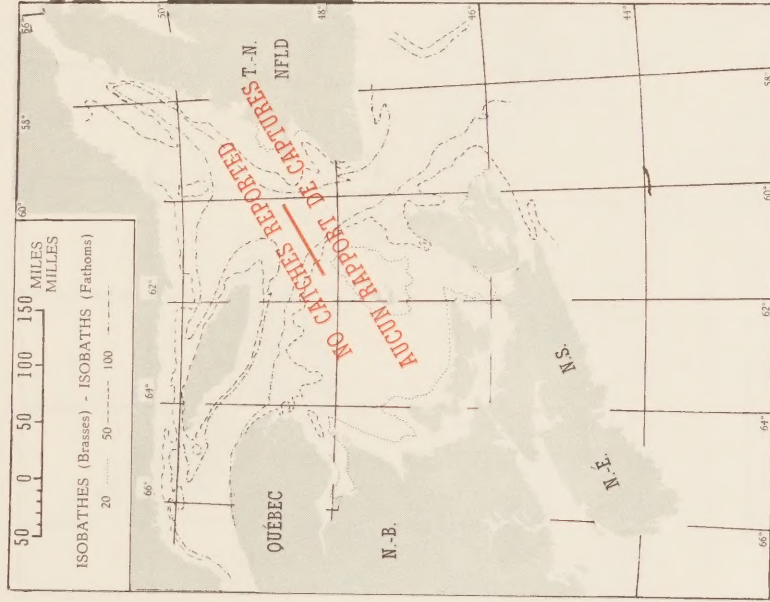
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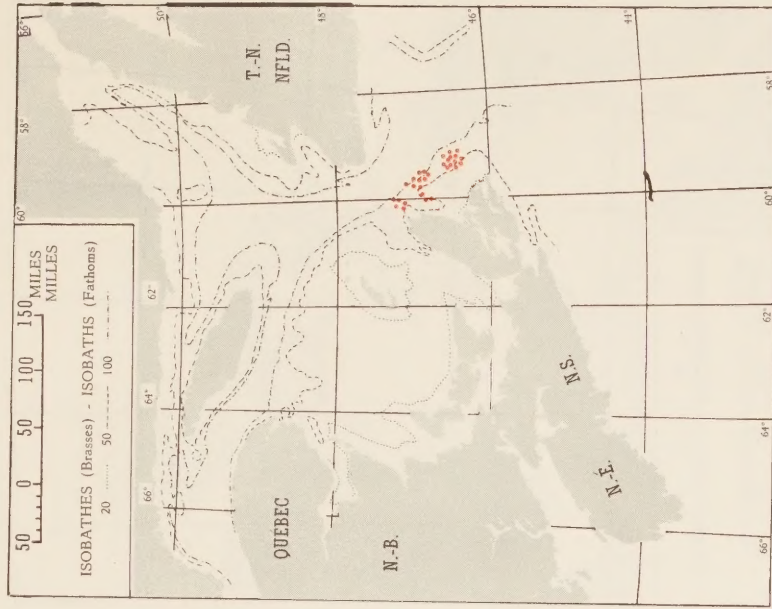
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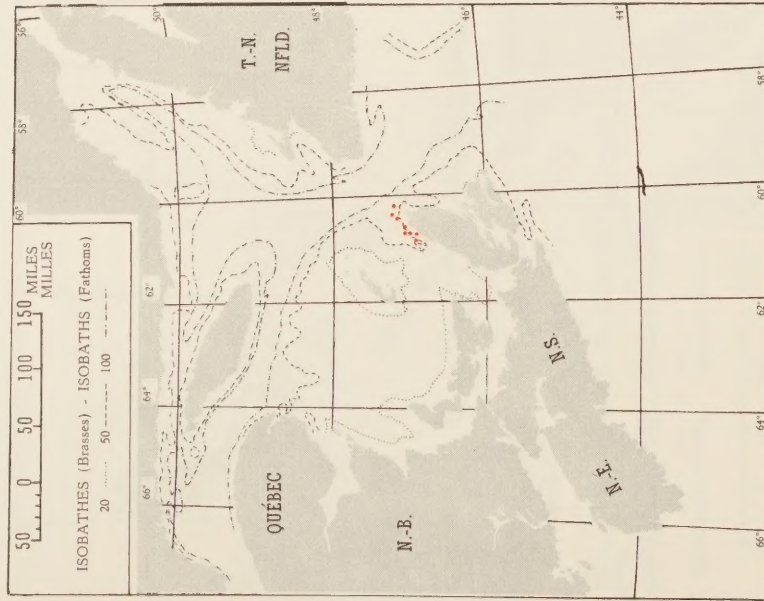
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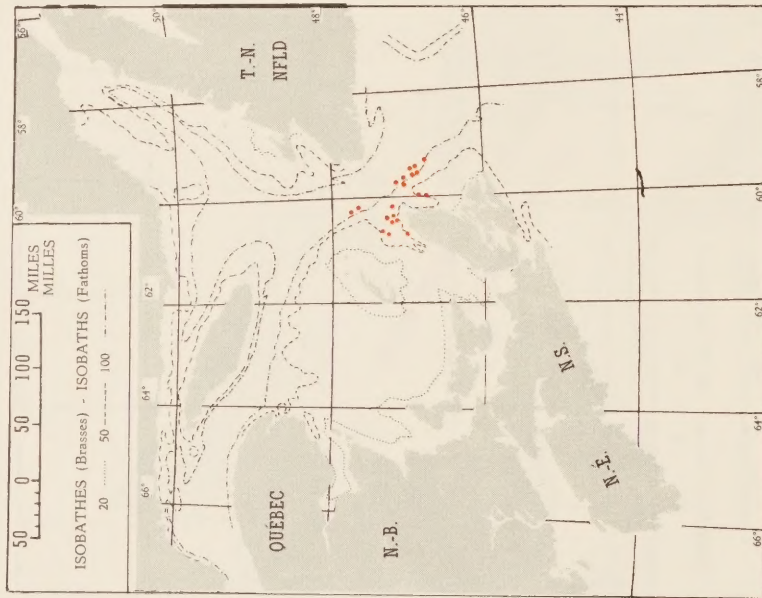
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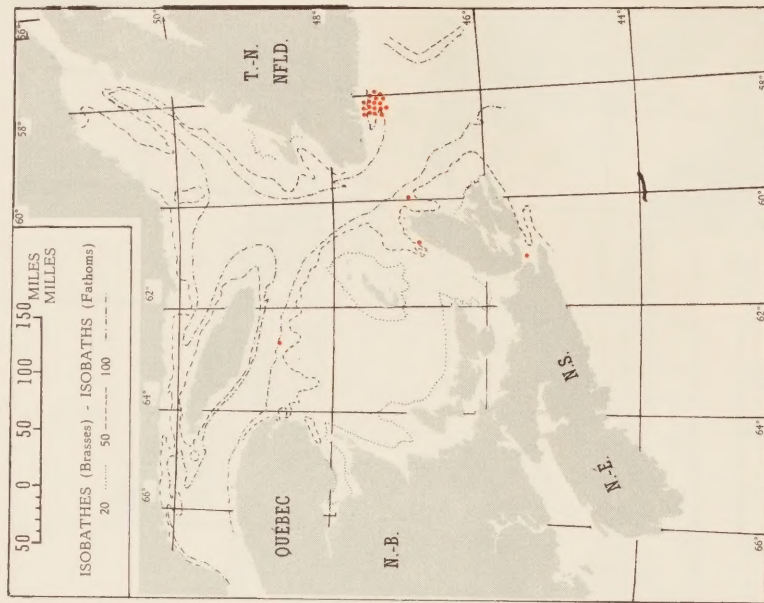
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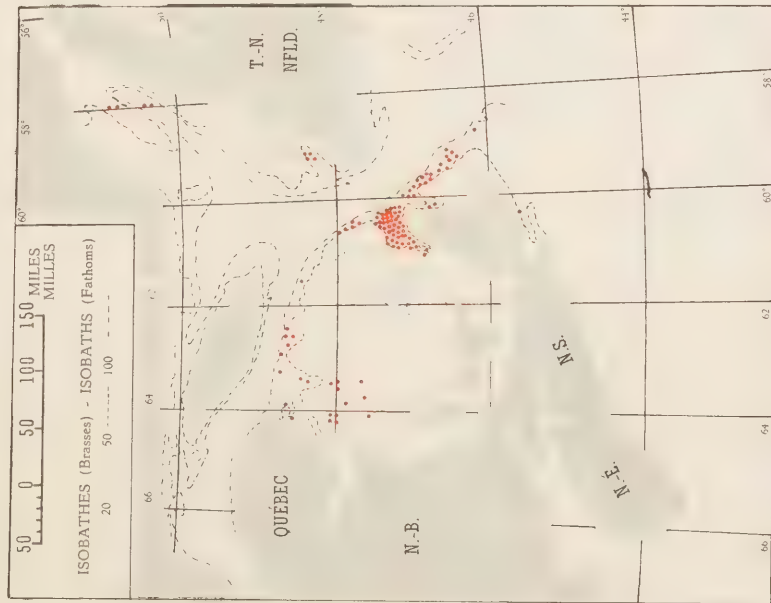
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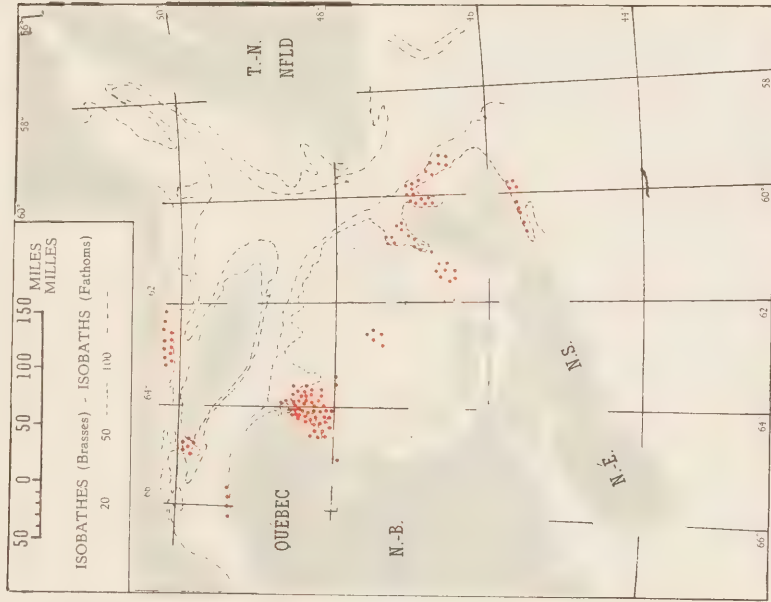
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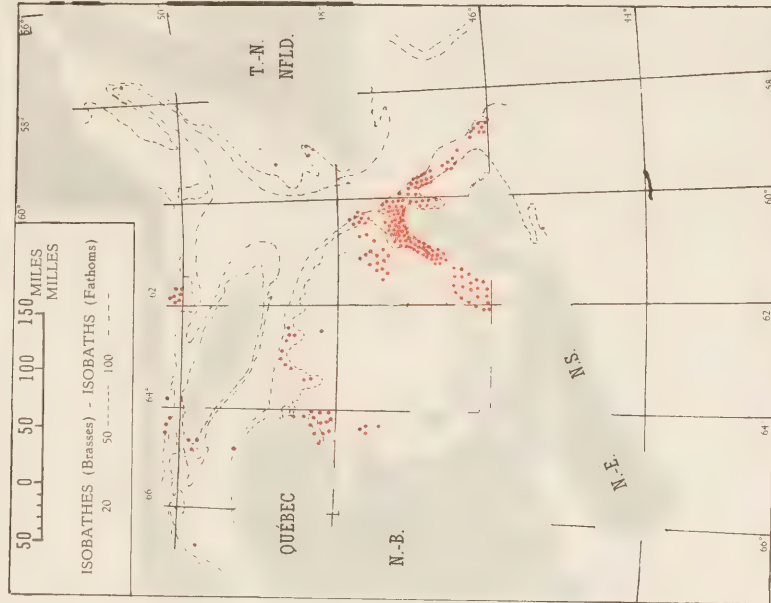
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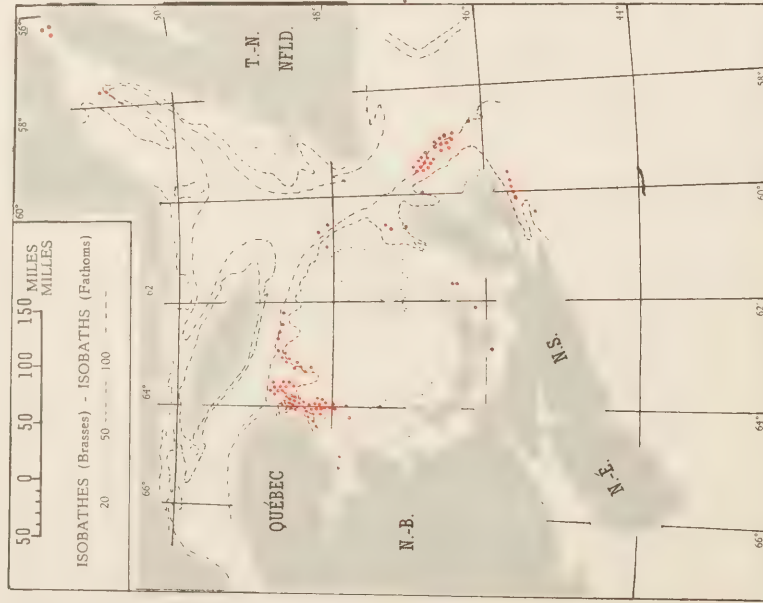
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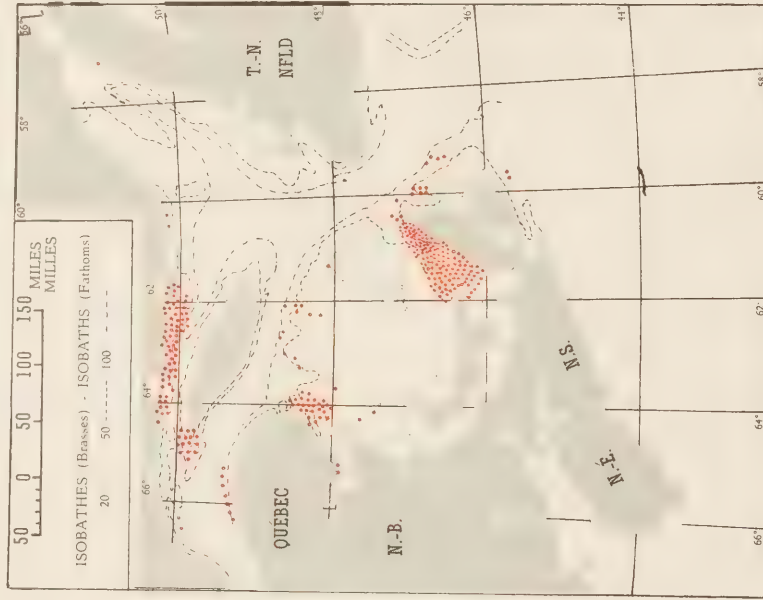
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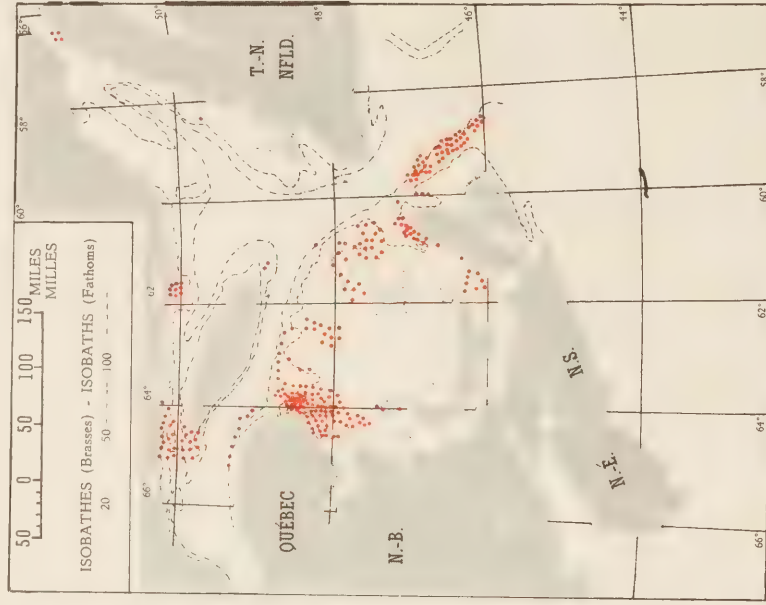
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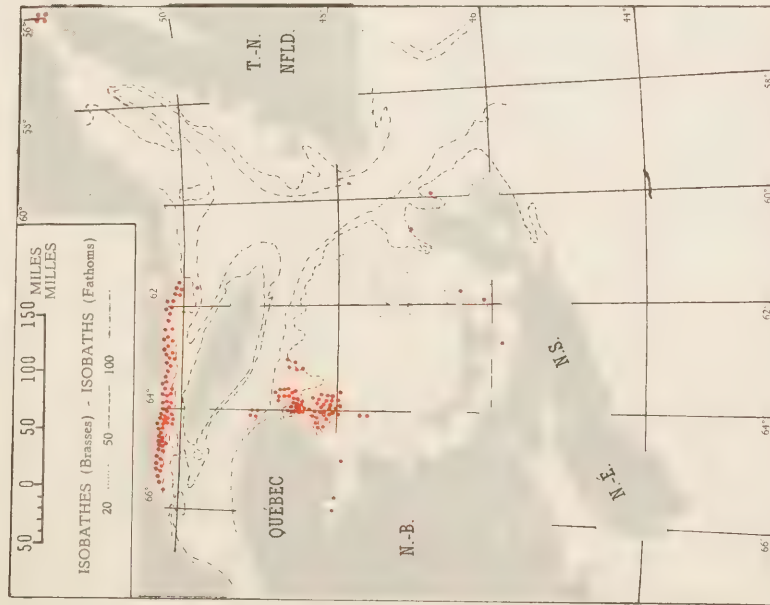
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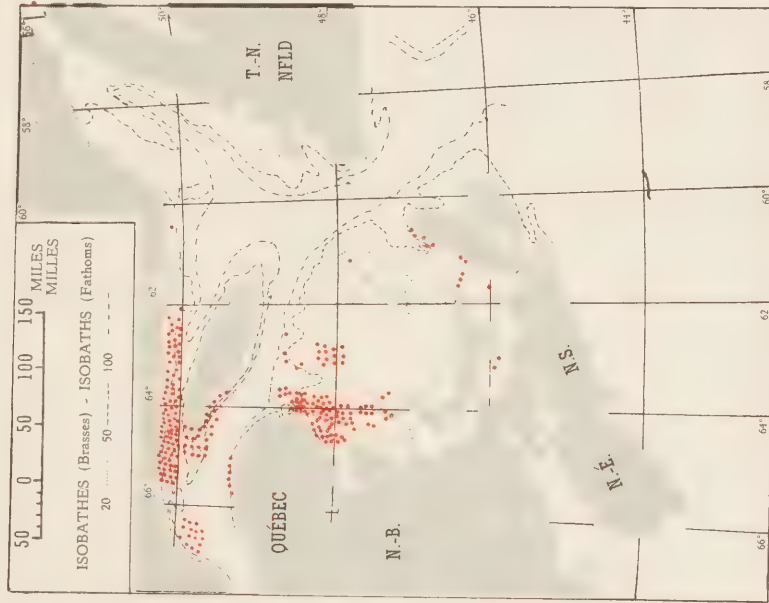
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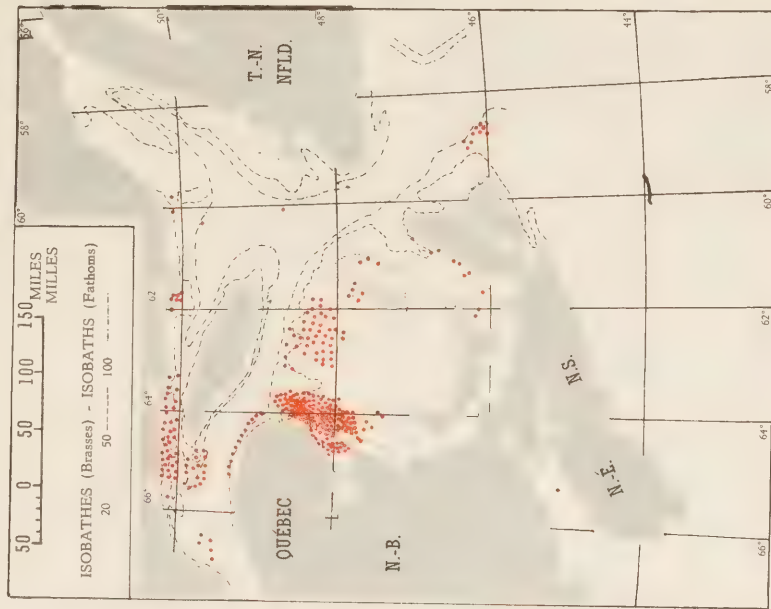
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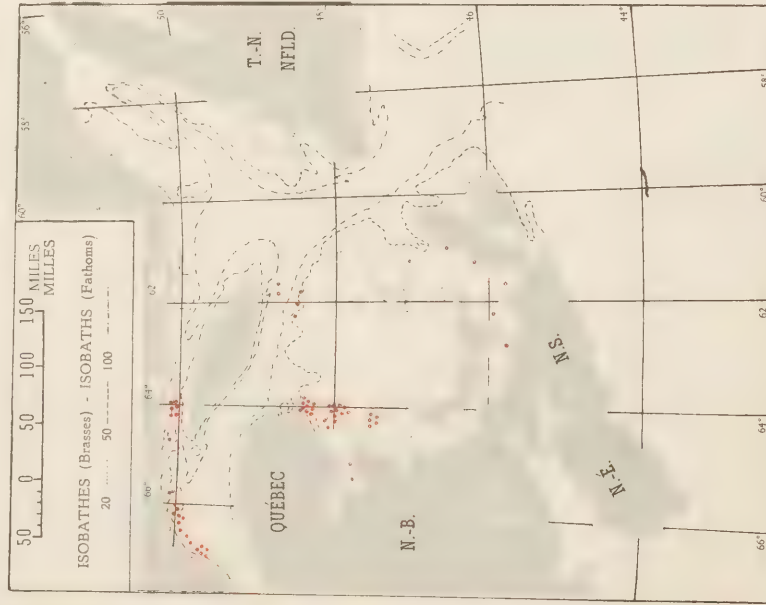
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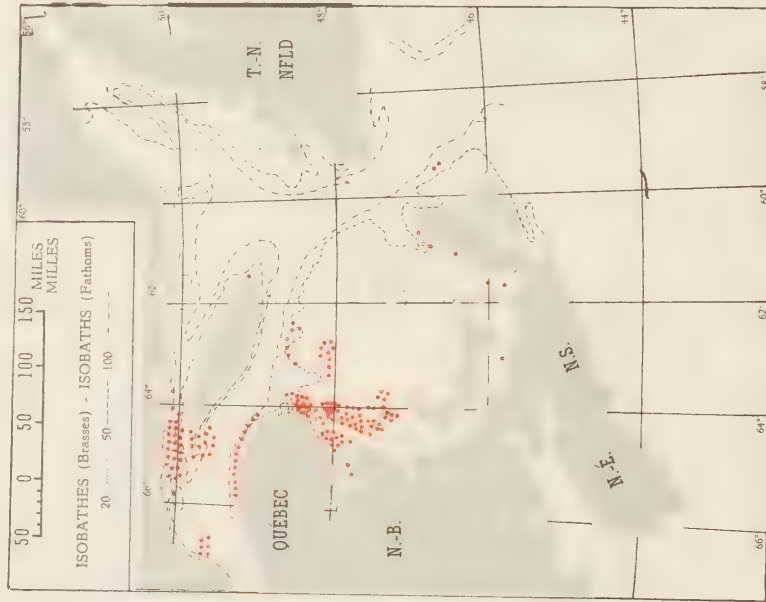
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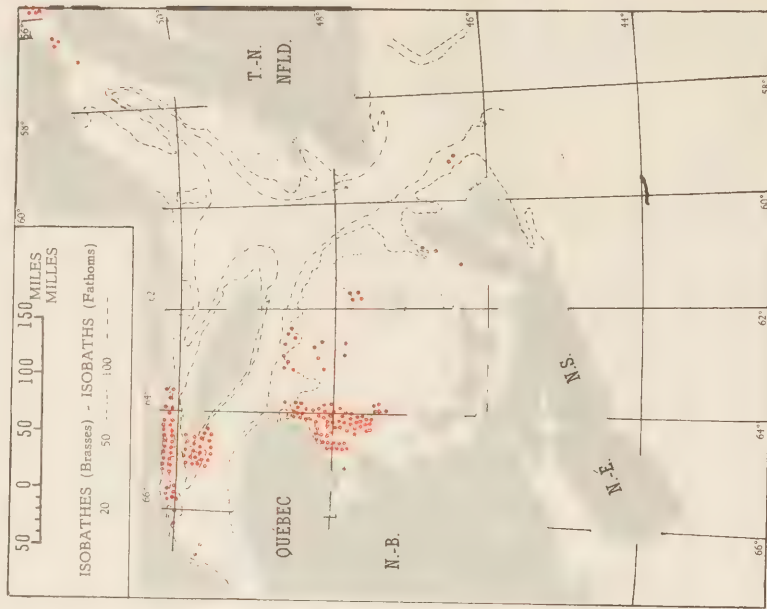
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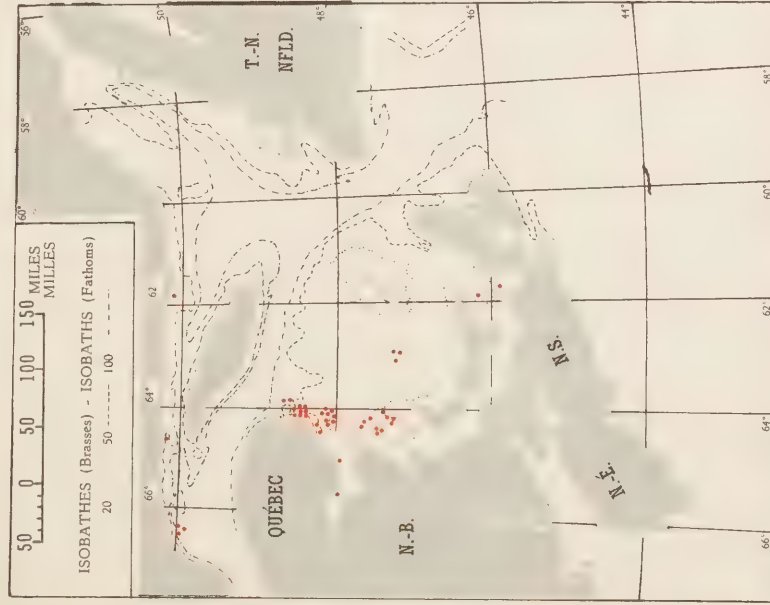
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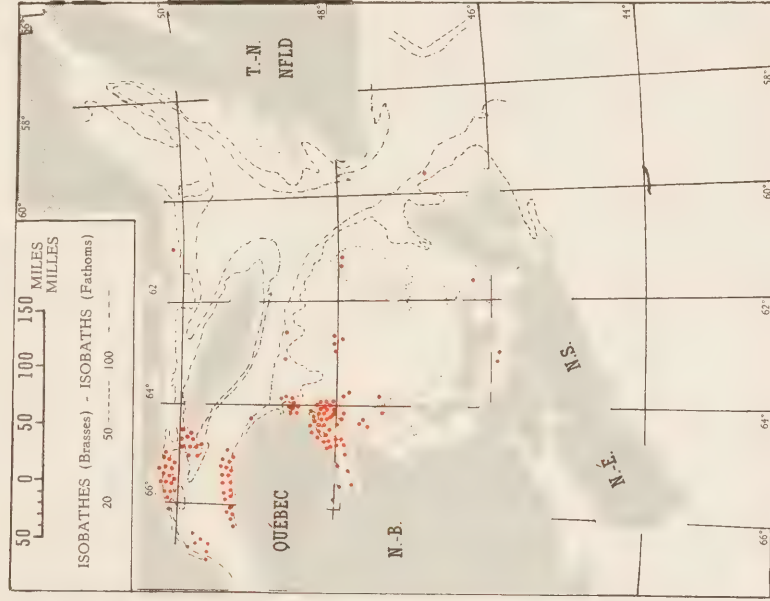
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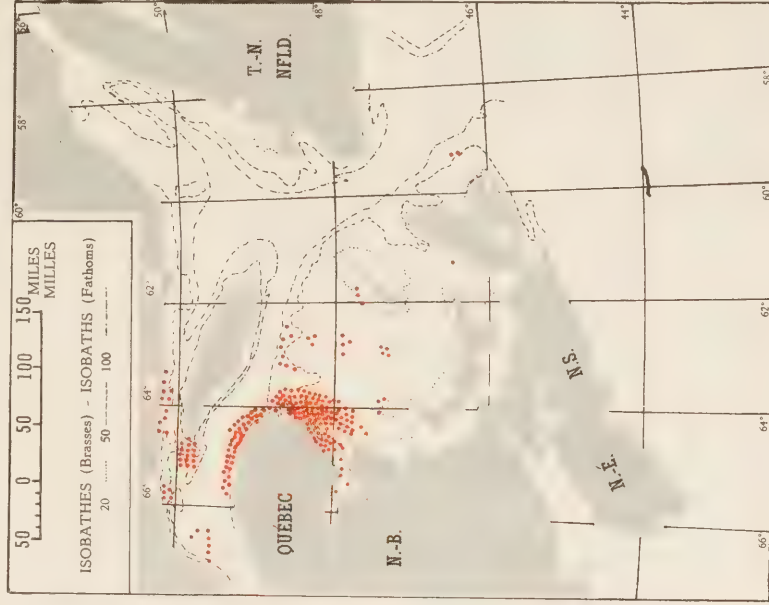
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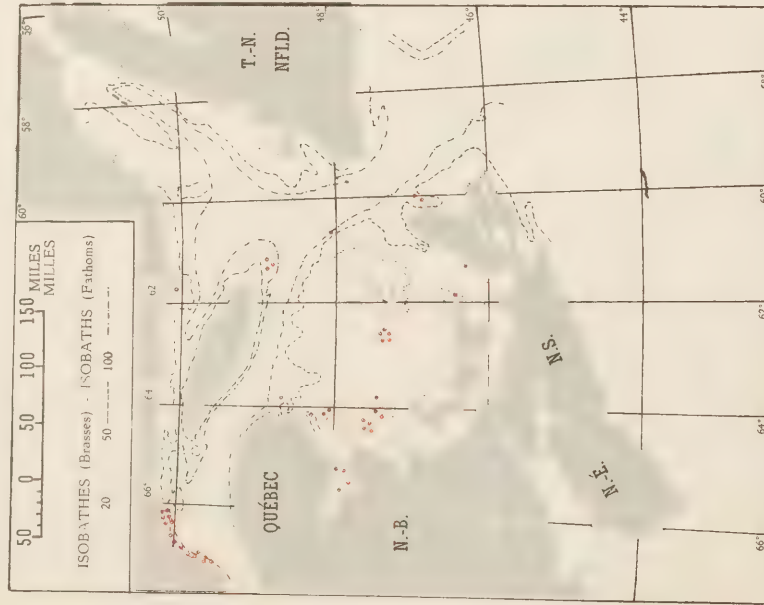
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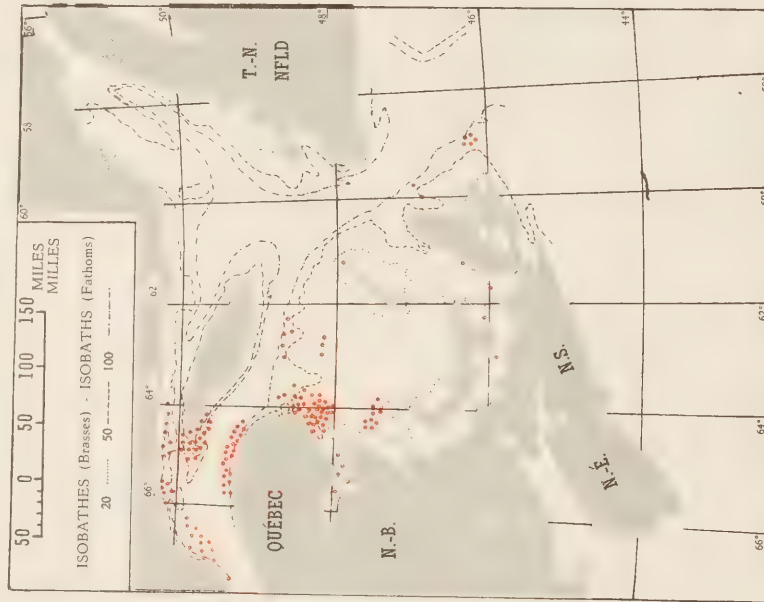
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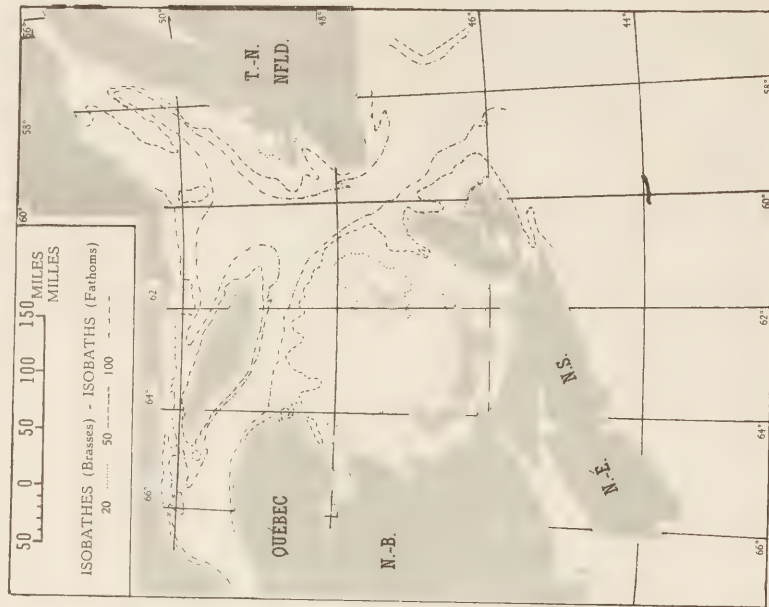
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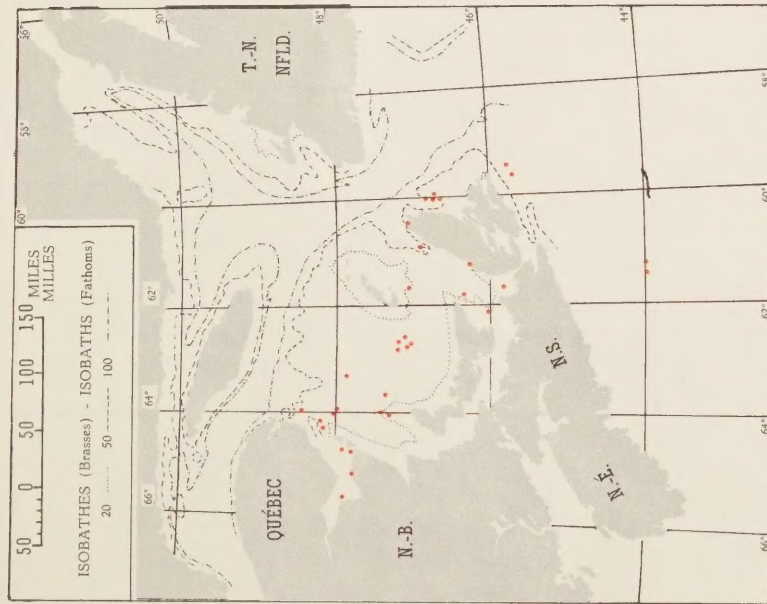
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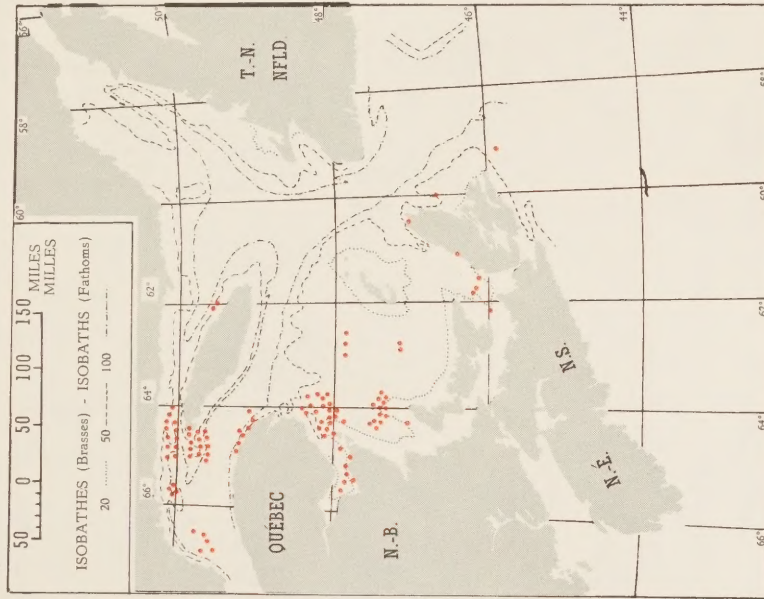
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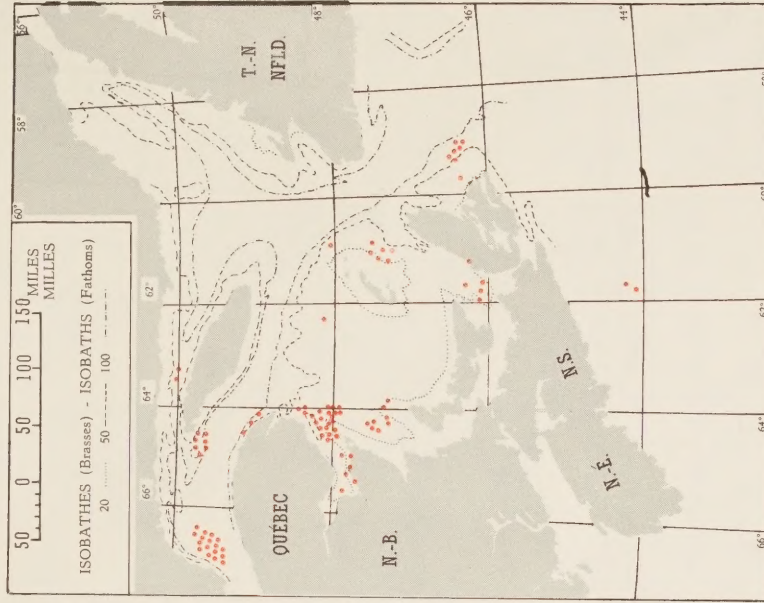
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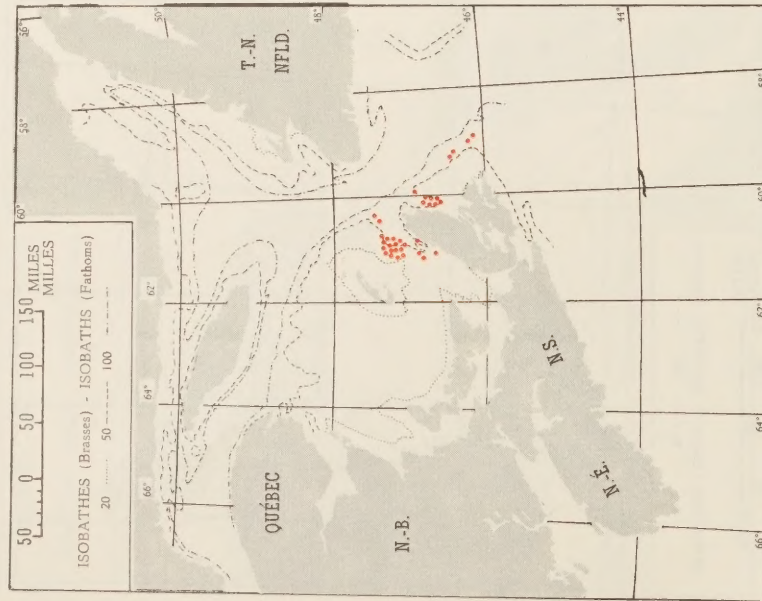
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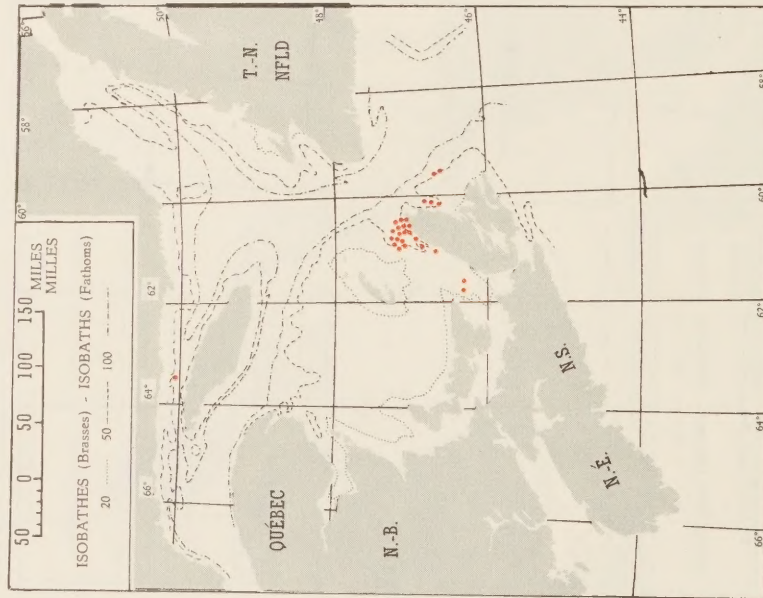
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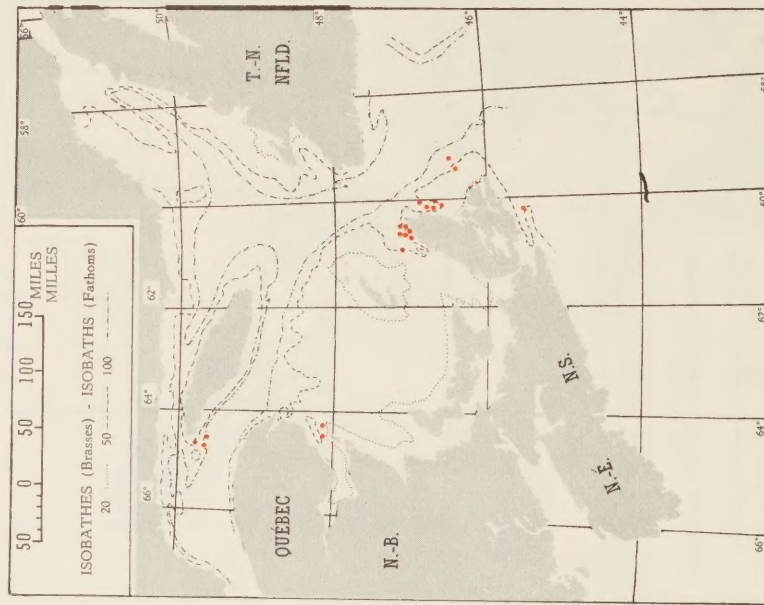
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1960



1961



1962

